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What is Infrastructure and Why is It Important?

What is Infrastructure?

"We are all builders. We know that to have a good structure, you must build a sound foundation.

Infrastructure is the foundation of California's economy and a viable quality of life, and unless we provide for it in a timely manner, our foundation will crack, and crumble, and our State's future will not be as our parents saw it 40 years ago."

Gary Hunt, Commissioner,
March 2001, CBIA Conference

Most of us have a good sense of what infrastructure is, although few of us have ever been asked to define it or think about how it affects our daily lives. This Commission defined infrastructure as *the basic resources and systems required for Californians to be mobile, secure, and productive in order to enjoy a high quality of life*. Residents, businesses and other types of institutions use and are served by infrastructure. Quality of life and productivity are directly affected by the availability and quality of infrastructure.

In today's economy and society, infrastructure can be defined by three core components:

- "Bricks and Mortar" infrastructure, which represents the most tangible physical elements such as public facilities, housing, transportation systems, power plants, transmission lines, and other improvements.
- "Resource" infrastructure, such as forests, parks, rivers, beaches, wetlands and energy sources that comprise our natural assets and systems.
- "Information" infrastructure, which includes technology and systems that provide access to the Internet, intellectual property, archives, digital content and the means to communicate information and ideas.



Los Angeles Convention and Civic Center, California

In addition to these forms of infrastructure, which are the focus of this report, there is also a "human infrastructure," that includes our workforce. This human infrastructure — California's people — requires sustained investment in our education and workforce development systems. These investments will help people access and use infrastructure of all types to enhance their quality of life and economic opportunity. In addition, these investments will provide the workforce, in both the public and private sectors, with the necessary skills to design, plan, build and manage the new infrastructure of the 21st century.

Why is Infrastructure Investment Important?

Infrastructure investment is absolutely fundamental to meeting the challenges of growth and changing needs in today's economy and society. Strategic infrastructure investments will enable us to achieve economic, environmental and quality of life goals concurrently. For example, we all know transportation networks are critical for moving people and goods and keeping California's economy competitive, but wise transportation investments will also reduce the time we spend in traffic and away from our families, give us more transportation choices, and improve the quality of the air we breathe. Investments in school facilities, including making the latest technology accessible to all our students and teachers, will improve our communities and provide opportunities for children and workers to be successful in California's 21st century economy. And these school investments will help California develop and attract the best workers by providing good schools for their children.

The Commission identified eight core investment categories—the eight building blocks identified below—that merit particular attention in meeting our current needs and laying the foundation for our future. This report uses these categories to frame its policy and implementation options and complementary financing approaches. Due to the importance of all infrastructure, the categories have been placed on equal footing and listed in alphabetical order throughout the report.

"An investment in infrastructure is an investment in California's future. The State's schools, highways, bridges, water systems, public safety facilities, and natural resources are the framework for individual and collective quality of life. Without a strong framework, both the public and private sectors of the economy will falter."

1999 Capital Outlay and
Infrastructure Report
California Department of Finance

The Eight Building Blocks that Contribute to California's Prosperity and Quality of Life



PHOTO CREDIT: VENTURA COUNTY TRANSPORTATION COMMISSION

Andrea Landeros,
First Place 8th Grade,
2001 Poster Contest Winner,
Ventura County
Transportation Commission

“Our goal has to be to provide the highest quality craftsmanship to protect local, regional and State investments in infrastructure. Insisting on the highest qualifications for contractors and the best training for our journeyman and apprentice construction workers is the only way to meet that goal.”

Robert L. Balgenorth,
Commissioner
State Building and Construction
Trades Council of California,
AFL-CIO

The infrastructure categories do not stand as separate elements. For example, in order to build a home, many systems are essential.

- Land must be zoned and approved for building our homes.
- Water supply must be available and connected to our homes.
- Power must be generated and transmitted to our homes.
- Schools must be available for our children.
- Roads and transit must connect our homes to work, services and recreation.

We will get more leverage from our investments and resources when we recognize the interconnectedness of the eight building blocks and target our investments to achieve maximum synergy across them. In fact, when specific attention is given to careful planning and coordination, these investments will address several infrastructure needs simultaneously. For example:

- The New Schools/Better Neighborhoods program in Los Angeles, California, demonstrates how school construction serves multiple community goals through joint-use, including libraries, parks, playgrounds and community facilities.
- Housing located next to transit corridors and connected to shopping and public facilities achieves housing, mobility, air quality and neighborhood improvement goals simultaneously.
- Cost-effective investments in renewable energy sources meet energy and environmental protection goals at the same time.
- Brownfields, which are abandoned and contaminated lands and facilities, are a potential economic development resource. When reused, they produce new jobs and healthier neighborhoods, increase local tax revenues, and reduce pressure to develop on prime farmland or habitat. According to the National Governor’s Association, each \$1 invested in brownfield development by a state yields as much as \$100 in economic benefits.

Finally, when investments are targeted to make better use of existing infrastructure investments and to meet multiple investment objectives, they will contribute to revitalizing our communities and increasing economic vitality for communities at risk or in decline.



*Cleanup of Damson Oil Corporation in Venice, California
Before and After*

PHOTO CREDITS: CALIFORNIA CENTER FOR LAND RECYCLING

Infrastructure in the 21st Century

Workplaces and lifestyles will change dramatically in the coming decades. Major shifts in social, economic, technological and environmental patterns will affect the way we live, work, and play. Such change creates new and different demands for infrastructure services. It will be important to identify these new requirements early on so that we can plan for and invest in appropriate infrastructure services.

In addition, California is undergoing profound demographic change, with an increasingly dynamic, diverse population. The 2000 Census shows that California is the first large “majority-minority” state with no majority racial or ethnic group, and we are increasingly multi-cultural. Future population growth will result primarily from births to existing families rather than migration or immigration. There is great diversity among California’s regions, not only in terms of population growth trends and characteristics, but also varying economic conditions and geography.

These changes will affect infrastructure in the following ways:

- As we become a more multi-lingual society, we need to plan for and provide services to increasingly diverse communities.
- By 2015, the percentage of children under age 18 will grow to levels not seen since the 1970s, increasing the demands for schools, recreation and child serving facilities.
- The population over age 65 also will grow rapidly, beginning in 2011, as Baby Boomers enter retirement age, thus changing our housing, transportation and health facilities needs.
- Studies show that Generation X, between the ages of 24 and 35, is a growing market for new housing and community design with urban amenities.
- One out of every two Californians lives in the Los Angeles region. The Central Valley is projected to become the second most populous region in the State. Future infrastructure investments must support where the population is living and is going to live.
- The typical workweek no longer exists; 45% of the workforce now works evenings, nights, weekends or rotating hours which changes the demand for transportation, child care facilities and services.
- As medical practice, research and technologies advance, people with disabilities will lead active lives and seek to be fully integrated into the community.



*Asian Pacific Islander California
Complete Count Census Day 2000,
Sacramento, California*



Roseville, California

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